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## CHINESE REACTIONS TO A CERTAIN US COURSE OF ACTION

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DEPUTY DIRECTOR OF CENTRAL INTELLIGENCE

*Concurred in by the*

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CENTRAL INTELLIGENCE AGENCY

3 August 1967

SUBJECT: SNIE 13-10-67: CHINESE REACTIONS TO A CERTAIN US COURSE OF ACTION

## THE PROBLEM

To assess the effects of a thin NIKE-X deployment[1/] on China's strategic strike program.

## CONCLUSIONS

A. We doubt that the US decision to deploy NIKE-X would have much, if any, impact on the timing of the IOC date for the Chinese

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1/ The deployment assumed here is that known as the 1-67 NIKE-X system and briefed to the Secretary of Defense on 5 July 1967. It basically consists of an area defense of the continental US and a terminal defense of selected Minuteman installations. The possible Chinese responses considered here do not include such unconventional methods as clandestine introduction of nuclear weapons into the US.

ICBM. The Chinese ICBM development program seems already to have high priority and there is little likelihood that it could be further accelerated.

B. A likely Chinese advanced weapons program through 1975 could include: (1) the deployment by 1970-1971 of sufficient MREMs, plus some medium jet bombers, to threaten major cities and most US bases from Japan through the Philippines, southeast Asia, and northern India; (2) the deployment, at a moderate rate, of first-generation ICBMs beginning in 1970-1971 at the earliest. Within this program, the main direct response to a US antiballistic missile (ABM) deployment would be the introduction of some warhead hardening and some relatively simple exoatmospheric penetration aids. If the Chinese are already planning such aids, they could be available by about 1973-1974.

C. Although we consider it unlikely, the Chinese could respond to a NIKE-X deployment by making a maximum effort in their ICBM program. This would involve stretching out or reducing other important military programs. Even in this case, however, and assuming highly favorable economic growth rates in China, we doubt that the Chinese could deploy more than about 100 ICBMs by 1975.

D. Beyond 1975, probable Chinese responses depend heavily on the events of intervening years. If the Chinese encounter major delays with

solid propellants for ICBM ranges, deployment of the first-generation vehicle in soft sites might be stepped up and deployment in hard sites initiated. More sophisticated penetration aids and further warhead hardening might also be introduced.

E. Regardless of the scale or speed of the Chinese response to a US ABM deployment, intelligence probably will be able to provide some advance notice of developments in the Chinese strategic weapons programs. The possible intelligence leadtimes are discussed in Section V of this paper.

## DISCUSSION

### I. CHINA'S ICBM STRATEGY

1. We have no direct evidence of the strategic thinking that governs the Chinese advanced weapons program. The present leaders probably believe that the successful development of an ICBM would greatly enhance their prestige and strengthen their claims to leadership in Asia and their status as a great power. They would also hope that the possession of a strategic capability would give them greater security in supporting revolutionary struggles, particularly in Asia, and that it would serve to lessen the dangers of nuclear strikes on

China itself for any reason. In other words, the Chinese may believe that the ability to strike the US with thermonuclear warheads would serve to limit US military operations in Asia and to keep any direct confrontation at the level of conventional arms, where the Chinese would expect to enjoy many advantages.

2. During the next two decades, the maximum strategic missile attack capability which the Chinese could realistically hope to achieve would be: (a) to acquire in the early 1970's the capability to hit some major population centers in the US, provided the Chinese weapons were launched prior to any counterforce attack by the US; and, (b) then to expand, improve, and protect this force so that at least a portion could be expected to survive a US attack. Insofar as any US ABM deployment tends to limit the strategic strike capability and deterrent effect of these programs, it is reasonable to expect that the Chinese will attempt countermeasures.

## II. CHINA'S CURRENT ICBM EFFORT

3. China's first-generation ICBM has not yet entered the flight test stage of its development cycle. Assuming only minor difficulties and delays are encountered, deployment could begin as early as 1970-1971. The missile might be capable of carrying a warhead,

weighing about 4,000 pounds, to a range of 6,000 nautical miles (n.m.). It will probably have radio-inertial guidance, use storable liquid propellants, and be deployed in soft sites.

4. Without considering the effects of a US decision to deploy NIKE-X, we can make some judgments about current Chinese plans for their first ICBM. First of all, China is likely to see advantages in deploying even an unsophisticated ICBM as soon as possible. Since the system will probably be deployed in soft sites, however, and be vulnerable to a first strike, it is questionable whether the Chinese would deploy their first ICBM in large numbers over several years. It seems more likely that the Chinese would, in time, choose to make their major investment in a less vulnerable system. Aside from these most general statements, we have no good basis for estimating the probable deployment program for China's first ICBM.

## III. MAXIMUM POSSIBLE CHINESE REACTIONS TO THE US DEPLOYMENT[2/]

5. We doubt that the US decision to deploy NIKE-X would have much, if any, impact on the timing of the IOC date for the Chinese ICBM. The Chinese ICBM development program seems already to have high priority and

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2/ See Section IV for our estimate of the probable Chinese response.

there is little likelihood that it could be further accelerated. It is conceivable that the Chinese might react by slowing work on their first-generation ICBM in favor of the development of a more sophisticated system. But this too seems unlikely; we believe that for political reasons alone the Chinese will strive for the earliest possible testing and deployment of an ICBM.

6. The maximum efforts which the Chinese might make to counter the NIKE-X deployment are shown in the attached chart. The judgments as to the time it might take the Chinese to develop various weapon systems are based on US and Soviet experience and on the present state of Chinese technology, as indicated by their current nuclear weapons and missile programs.

7. It is important to note that these projections are not our estimates of the most likely pace of development. They represent our assessment of the best the Chinese could do if future Chinese leaders continue to give the ICBM program the priority it now enjoys, and if each of their programs achieved a nearly maximum degree of success.

8. The ability of China's economy to bear the costs of developing and deploying an intercontinental strike capability, while at the same time supporting other ambitious military programs, is open to serious

question. The rates of development and deployment shown in the table would require that the Chinese reach and sustain high rates of growth throughout the economy. Such growth now appears unlikely at least for the next several years, particularly in view of the continuing general disruptive effects of the Cultural Revolution. Unusually favorable conditions would be required, such as agricultural output growing faster than population, increasing access to foreign markets and credits, good management, and political stability. Even with favorable conditions, the proportion of heavy industrial resources allocated to all military requirements probably would not be increased much, because such action would deny the rest of the economy the level of investment needed to sustain its rate of growth at a high level. In order to pay for an intercontinental capability such as described here, spending for development and production of other types of military hardware would probably have to be held at approximately present levels. This in turn would mean that Peking would have to cut back or stretch out some other military programs now just reaching the deployment stage -- e.g., SAMs, MRBMs, short-range cruise missiles and, possibly, a follow-on to the Mig-19.

A. ICBM Programs

9. Maximum First-Generation Deployment. Through 1975, the Chinese might maximize the deployment of a soft, first-generation system,

especially if they saw no good prospect of having large and increasing numbers of hardened missile sites (with first or second-generation missiles). In such an effort, as many as 100 launchers might be deployed by 1975. In a first strike role, in which the Chinese would have unlimited time to get their missiles ready, this force might have a reliability of about 70 percent. If work was begun when the NIKE-X decision was made, China could develop exoatmospheric decoys for this system before deployment of a NIKE-X defense was completed. Though we do not know their characteristics, specially hardened reentry vehicles (RVs) might be available toward the mid-1970's. Depending on the progress in reducing the size of warheads, the system might include multiple warheads (2 or 3) of reduced yield, perhaps as early as 1975.

10. Beyond 1975, the Chinese might choose to continue to deploy an improved version of the first-generation ICBM. Alternatively, they might decide to develop a second-generation liquid propelled system. Either course might involve greater dispersal and hardening of launch sites.

11. Maximum Two-System Deployment Through 1975. There is some basis for postulating a hardened, second-generation, solid-fueled ICBM. The Chinese have almost completed a large installation at Hu-ho-hao-te in Inner Mongolia which we believe is for testing and manufacturing composite solid fuel rocket motors, including some of relatively large size. It will probably be three years before motors developed here could be ready for flight testing. With the experience gained in missilery since the

late 1950's, and assuming no major setbacks in design and development work, the Chinese might be able, by the mid-1970's, to design and complete the development of a three-stage solid-fueled missile with a warhead weight of about 2,000 pounds, and a range of about 6,000 n.m.

12. If China should limit the deployment of its first-generation system, it could, by 1975, have a combination of first and second-generation missiles deployed at about 50 soft sites and some 10 to 30 hard sites. They could, however, by continuing the second-generation program, have some 300 ICBM launch sites operational by 1980.

B. Penetration Measures

13. A decision to deploy NIKE-X would force the Chinese to consider measures which would give them a better chance to saturate or penetrate US ABM defenses with limited numbers of ICBMs. The relatively small size of the warhead of any solid propellant ICBM would increase the problem of hardening it to a degree necessary to offer some protection against the NIKE-X system. We have no basis, however, for making quantitative estimates of the probable hardness of either system.

14. China may also develop exoatmospheric decoys, e.g., balloons. The leadtime for the development and deployment of such penetration aids would vary. But, in general, if development work on exoatmospheric decoys began in 1968, they probably could be available before 1973 or 1974, when the full operational capability of a thin NIKE-X defense might be achieved. The development of an effective chaff system and of sophisticated, endo-atmospheric decoys would be difficult and probably could not be accomplished until some time after 1975.

15. Multiple RVs that could be used on the first-generation ICBM might conceivably be available as early as 1975. Probably the best they could hope to achieve by 1975 or so would be a system with 2 or 3 warheads,

C. Regional Deterrent

16. We believe that the Chinese are already preparing to deploy a regional strike capability consisting of MRBMs and, possibly, medium jet bombers. The present status of the G-class diesel-powered ballistic missile submarine program is obscure. If the Chinese perceived that a US ABM effort would nullify the deterrent value of their early ICBM, they might react by focusing their resources on enlarging and improving their

regional force in the hope that they could threaten US bases near China as well as important cities of Asian allies of the US. If the Chinese chose this course, they would almost certainly view it as only an interim expedient while they worked on ways to achieve a credible threat against the continental US.

D. Submarine-Launched Missile Systems

17. China has already built one G-class submarine capable of carrying 3 ballistic missiles which could have a range of 350 n.m. But no such missile for this submarine has yet been detected. The Chinese probably could produce a maximum of 6 boats by 1975. But these submarines would probably be able to fire only when on the surface, and the Chinese would have major problems in operating them far from their bases. Hence, these submarines will pose little threat to the US; their chief usefulness would be as part of a regional capability, and for training in preparation for later nuclear-powered models. China might be able to develop a nuclear-powered submarine by the late 1970's. Additional submarines might not be available until 2 to 3 years after the commissioning and successful testing of the first unit.

E. Other Systems

18. Awareness of the US ABM potential may already have caused the Chinese to consider the development of more complex techniques such as

MIRVs and fractional orbital bombardment. We doubt, however, that any of these could be developed as effective weapons earlier than the 1980's.

## IV. THE PROBABLE CHINESE RESPONSE

19. Each of the responses discussed above represent a maximum possible effort by the Chinese under optimum conditions. We think that such conditions are unlikely to prevail and that through 1975 the Chinese ICBM program will show less quantitative and qualitative progress than postulated in Section III. For one thing, we believe that the Chinese will want fairly extensive SAM and MRBM programs, regardless of what the US does about NIKE-X. The Chinese will probably also attempt to meet the continued requirements of the general purpose forces.

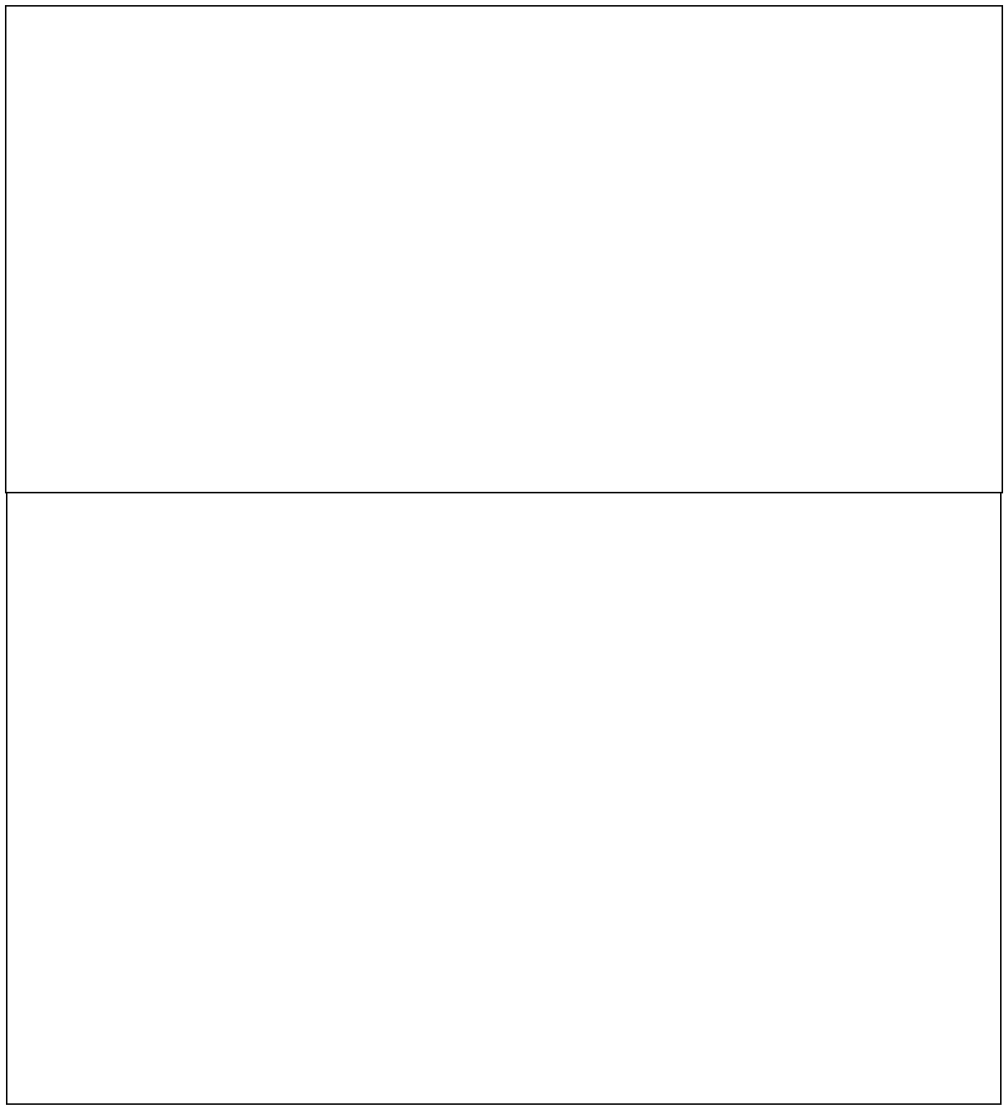
20. For these reasons, and because the Chinese still have a limited scientific, technical, and industrial base to support sophisticated research and development (R&D), and production, we doubt that the Chinese can respond with a large-scale acceleration of their advanced weapons program during the early 1970's.

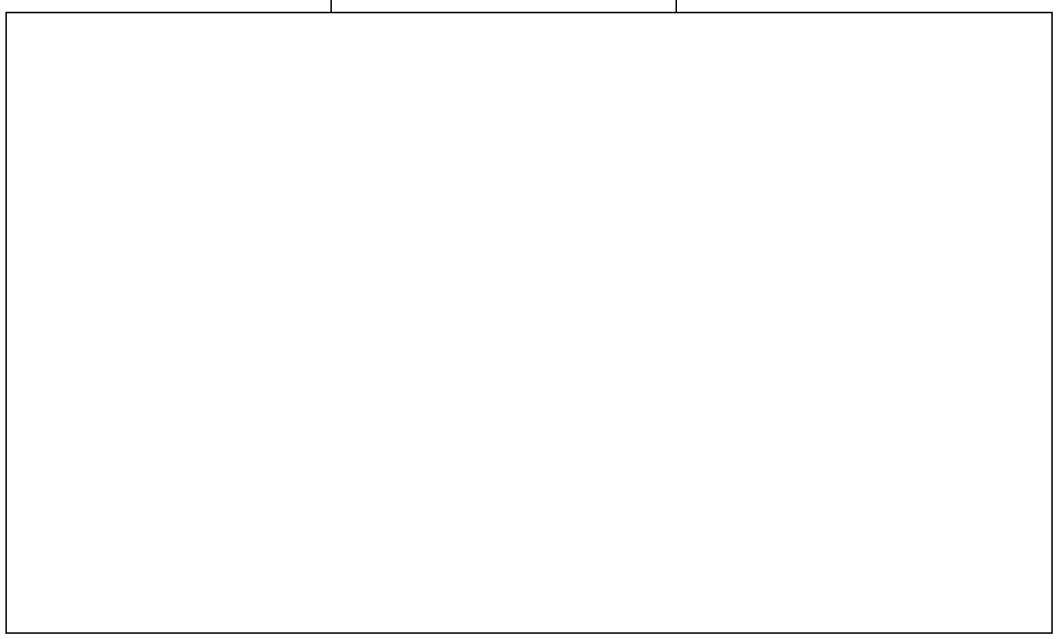
21. A likely Chinese program through 1975 could include: (a) the deployment by 1970-1971 of sufficient MRBMs simultaneously to threaten major cities and most US bases from Japan through the Philippines, southeast Asia, and northern India; (b) the deployment of first-generation ICBMs,

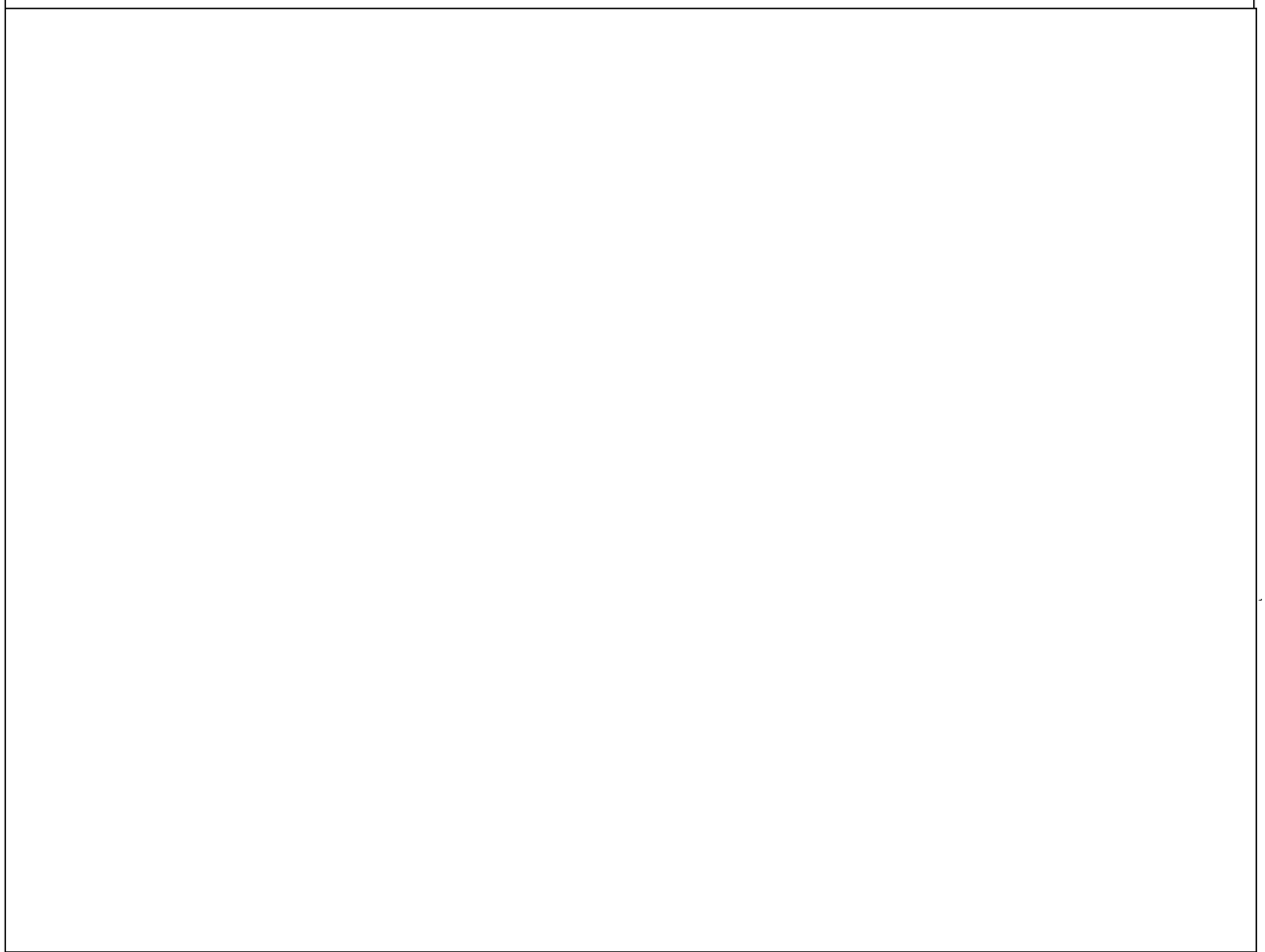
beginning as early as 1970-1971, at a rate well below the postulated maximum program; (c) some warhead hardening and some relatively simple exoatmospheric penetration aids could be introduced by 1973-1974.

22. Through 1975, we doubt that the Chinese will be striving specifically for a capability to saturate US NIKE-X defenses. In view of the requirements of other military programs and the pressure on resources, we believe ICBM deployment will proceed at a moderate pace and well below a maximum effort. By moderate, we mean that in 1975 the number of operational ICBM launchers might fall somewhere between 10 and 25.

23. Beyond 1975, probable Chinese responses depend heavily on the events of intervening years. If the Chinese encounter major delays with solid propellants for ICBM ranges, deployment of the first-generation vehicle in soft sites might be stepped up and deployment in hard sites initiated. More sophisticated penetration aids and further warhead hardening might also be introduced.







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